

The Maryland Agricultural College

QUARTERLY.

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No. 18.

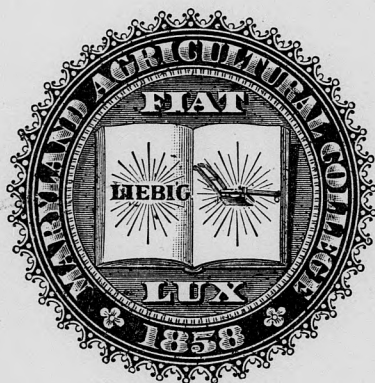
NOVEMBER.

1902.

PUBLISHED BY THE COLLEGE.

R. W. SILVESTER, ... President.

Edited by H. B. McDONNELL, Professor of Chemistry.



Published for the Benefit of Agriculture and Sent Free
to Any One Desiring a Copy.

Issued in the Months of February, May, August and November.
Contributions and Correspondence Invited.

ADDRESS

Chemical Department, Maryland Agricultural College,
COLLEGE PARK, MD.

.....P. O.

.....190

Dear Sir:

*I hereby apply for admittance to the Short
Winter Course in.....
at the Maryland Agricultural College and Experiment
Station commencing January 6th, 190.....*

I expect to enter on.....

Name.....

County.....

President,

Maryland Agricultural College,

College Park, Maryland.

A RARE CHANCE
FOR
YOUNG FARMERS AND DAIRYMEN.



SHORT WINTER COURSES
IN
AGRICULTURE AND DAIRYING.

MARYLAND AGRICULTURAL COLLEGE AND

EXPERIMENT STATION,

COLLEGE PARK, MARYLAND.

1903.

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The experience of the most progressive and successful agricultural States has absolutely demonstrated two facts. First, that in this day of close competition and low prices a farmer, in order to be successful, must practice scientific methods in handling his crops and stock; and second, that the place for the farmer to learn scientific methods is at his agricultural college and experiment station.

Fully impressed with the truth of the above facts the Maryland Agricultural College and Experiment Station present to the farmers of the State the following prospectus of their Short Courses in Agriculture and Dairying for the winter of 1902-3.

During the six years these short courses have been given they have been modified and enlarged, as experience dictated, to suit the needs of the practical farmer and dairyman, and it may be stated with perfect confidence that in no other way can a young man engaged in either of these pursuits so profitably invest a small amount of time and money as in taking one of these short courses.

The attendance on these short courses has been limited heretofore by lack of adequate boarding facilities for the students, but that difficulty has been at least temporarily remedied by the erection of a building specially designed for the accommodation of special course students.

TERMS.

Tuition and room free. Table board will be furnished by the College at four dollars per week. Students will be expected to furnish their own bedclothes, pillows, towels and napkins.

SHORT WINTER COURSE IN AGRICULTURE.

This course will begin on Monday, January 5th, 1903, and will continue ten weeks. It will be open to all young men over 16 years of age. The aim of the course will be to give the largest possible amount of information on strictly agricultural topics, by means of lectures, laboratory instruction and practical work in the field, orchard, greenhouse, stables, creamery and carpenters and blacksmith shops. Students will be required to take not less than two hundred and fifty hours of work.

SYNOPSIS OF COURSE.

I.—Soils.—Twelve Hours.

Prof. W. T. L. Taliaferro.

The examination and classification of soils; the relation of soils to water, air, heat; adaptation of soils to crops; improvement of physical condition of soils; drainage, ventilation, cultivation, green manures, cover crops, rotation of crops.

II.—Plant Production.—Ten Hours.

Prof. W. T. L. Taliaferro.

Varieties, improvement, soil requirements, cultivation, planting and harvesting of field crops, including corn, small grains, legumes, grass, silage and soiling crops, potatoes and root crops.

III.—Farm Live Stock.—Eighteen Hours.

Prof. W. T. L. Taliaferro.

Principal breeds of horses, cattle, sheep and hogs, their uses and adaptation; principles and practice of stock breeding; stock judging.

IV.—Stock Feeding.—Ten Hours.

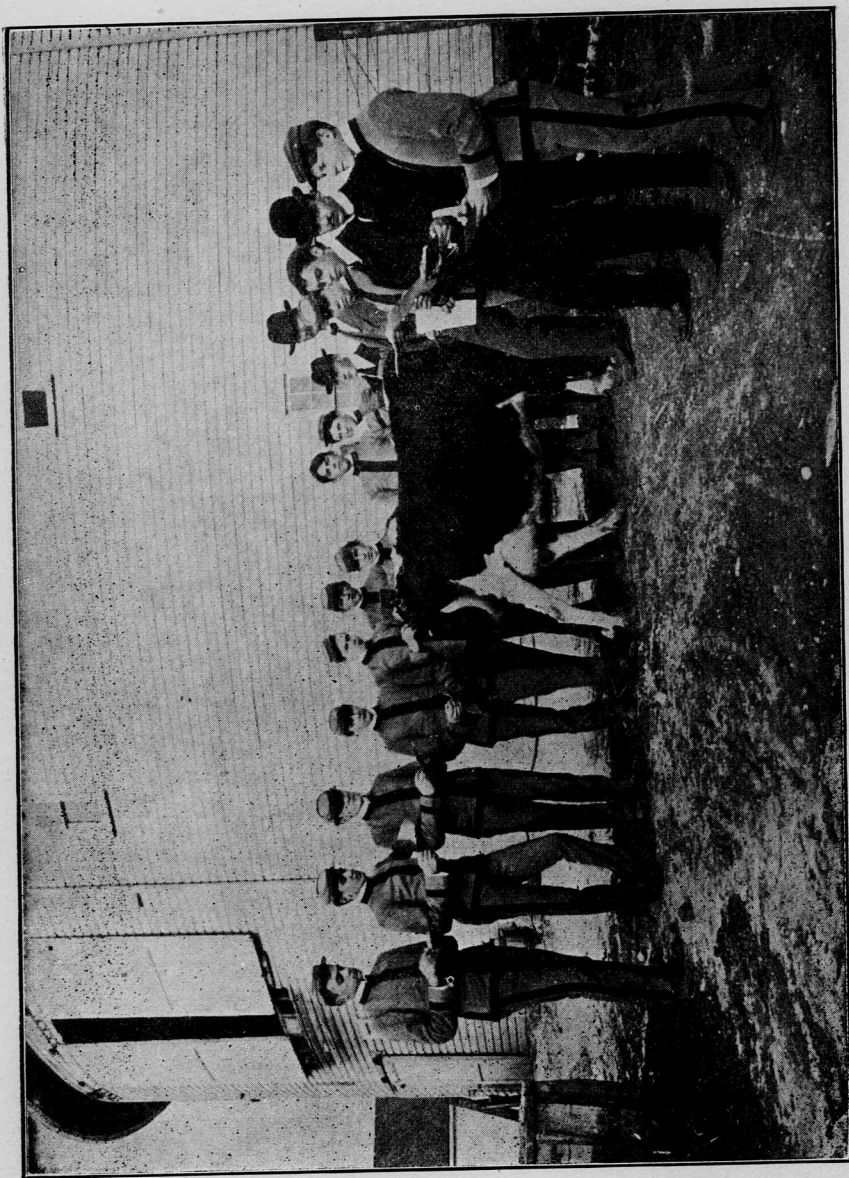
Prof. H. J. Patterson.

The composition and digestibility of the different feeding stuffs: what is meant by a well-balanced ration and the calculation of such rations with given materials; feeding for maintenance, fat, butter, eggs, wool, milk; the effect of food on quality; the preservation and preparation of coarse fodders; ensilage; steaming and cooking food, etc., etc. Not only will the theory be studied, but a careful carrying out of the theory in practice will be the features of the course.

V.—Tobacco.—Five Hours.

Prof. H. J. Patterson.

The plant bed, culture, harvesting, curing, marketing, and effects of fertilizing elements upon the quality.



CLASS JUDGING DAIRY COWS.

VI.—Manures.—Twenty Hours.

Dr. H. B. McDonnell.

The best methods of preserving and applying farm manure. The relative value of the different manures and fertilizers. The maintenance of soil fertility. The place of lime in the farm economy.

VII.—Agricultural Chemistry.—Twenty Hours.

Dr. H. B. McDonnell.

Soils. Their formation, classification and properties. The mineral constituents of soils and their bearing on plant growth. The best means of supplementing them when needed for plant growth.

VIII.—Dairying.—Forty Hours.

Prof. C. F. Doane.

The dairy instruction will consist of lectures on bacteriology and the necessary precautions to insure a good product; lectures on the obtaining of cream from the milk, comparing the old gravity process and the use of separators; on milk testing with the Babcock test and the place of the test in modern dairying and on butter making with the use of the acid test, which practically insures the making of good butter. The lectures on milk testing and butter making will be supplemented by practical instruction and each student will be required to handle the Babcock test as well as the separator and the churn.

IX.—Veterinary Science.—Twenty Hours.

Saml. S. Buckley, D. V. S.

Digestion of food under normal conditions.

Results of faulty conditions in feeding stock.

Disorders and diseases of digestive tract and correction of the same.

The use of medicines and performance of operations in emergency cases among animals by the non-professional.

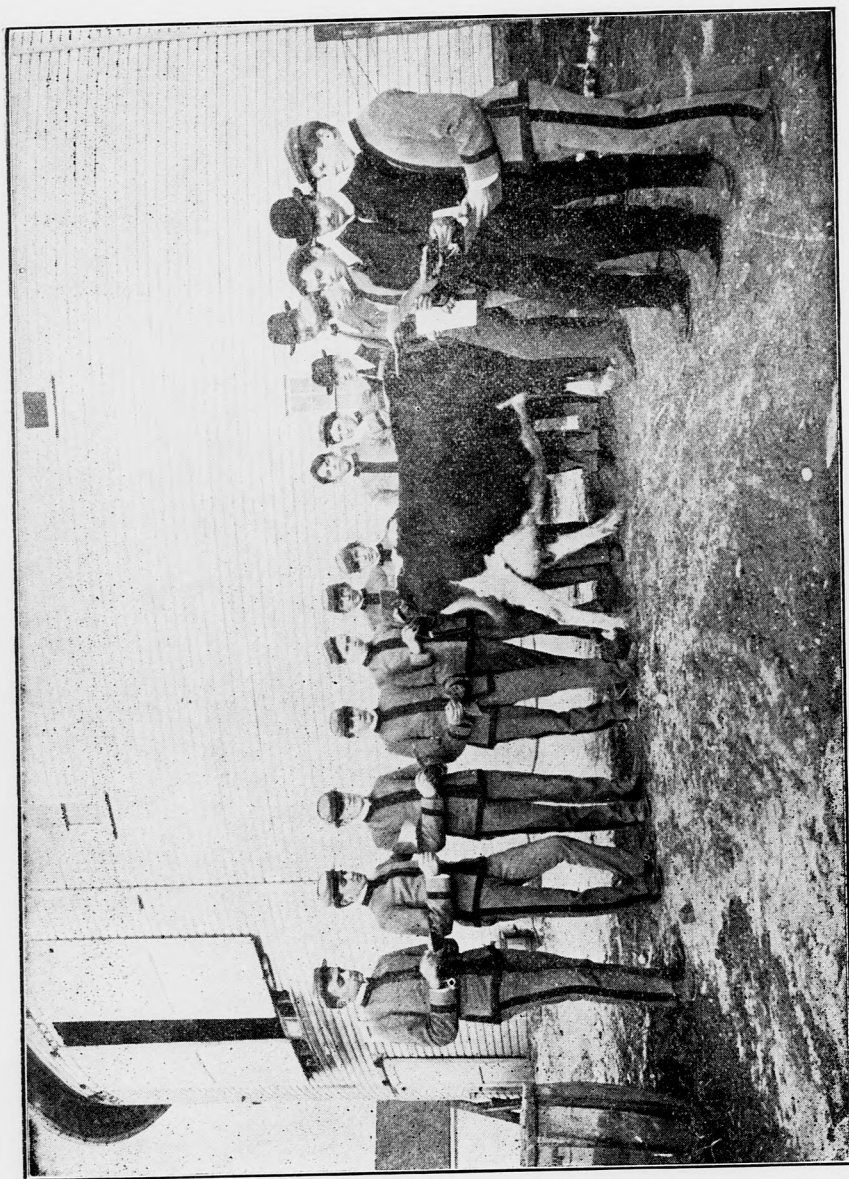
Bandages and method of applying them.

Method of detecting lameness and treating certain forms of lameness.

Points on the examination of horses before purchase.

Cattle and some of their disorders.

Infectious diseases and how to deal with them. The limited time for the course will necessitate a brief consideration of each subject,



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but it is hoped to place the matter before students in such a way as to be of practical benefit in the care of live stock.

X.—Carpentry and Blacksmithing.—Fifty-five Hours.

Prof. J. H. Mitchell and Mr. Blandford.

A knowledge of this is very important to the agriculturist of this day. The equipment for this instruction is complete. The industrious, eager seeker after knowledge will accomplish much in the line of this work in the time allotted.

1. Sharpening of tools.
2. Adjustment of tools.
3. Sawing, Planing, Chiseling and Boring.

Practical Lessons in Blacksmithing.—Mechanism of, and care of forge and smith's tools. Preparation of forge for fire. Building and managing the fire and fluxes. Forging, bending, welding. Pipe Fitting.

XI.—Plant Physiology and Pathology.—Fifteen Hours.

Prof. J. B. S. Norton.

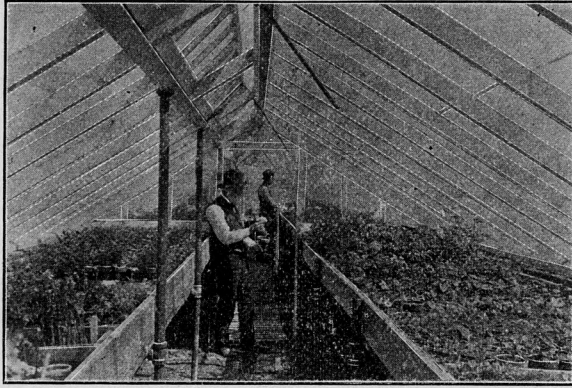


PREPARATION OF BORDEAUX MIXTURE.

Five lectures on the general principles of plant life and structure; how plants live, grow and reproduce and how they are influenced by different conditions of light, temperature, moisture and other factors in their surroundings; considered with special reference to agricultural problems. Five lectures on the causes, symptoms and treatment of plant diseases with practice work in examination and study of diseased plants and the preparation and use of remedies and preventatives.

This course will include the discussion of the laws of plant life,

the uses and structure of plant parts, nutrition, growth, formation of products by the plant, reproduction by seeds and otherwise, seed testing, useful plants, weeds, poisonous plants, geographical distribution, variation, acclimatization, cause of diseases, parasitic fungi, preparation of fungicides and spraying.



INTERIOR OF GREENHOUSE.

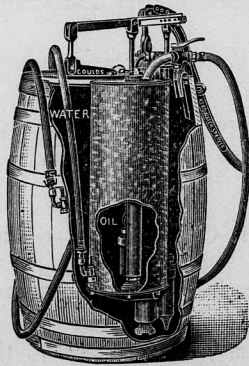
XII.—Horticulture.—Thirty Hours.

Prof. J. S. Robinson and Prof. Austin.

Construction and management of hot-beds and cold-frames.

The propagation of plants.

Spraying for insect enemies and plant diseases; a study of spraying apparatus and the making of insecticides and fungicides. A discussion of the fundamental principles of fruit growing or Pomology. Pruning for different objects. These lectures will be supplemented by practical work in the greenhouses and orchards.



A "KERO-WATER" SPRAY PUMP.

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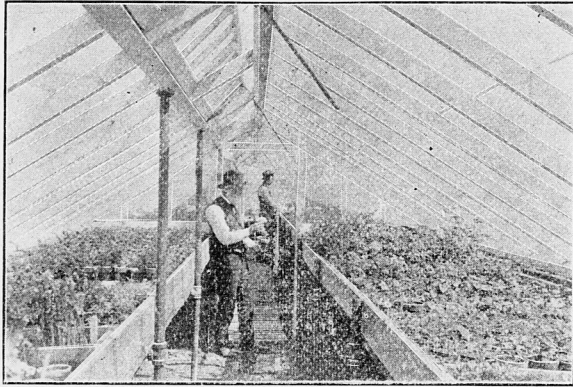


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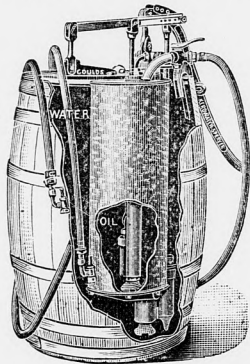
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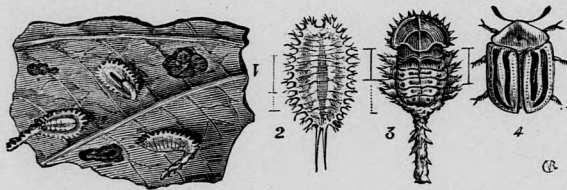
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XIII.—Economic Entomology.—Twenty Hours.

Prof. A. L. Quaintance.

These lectures will treat of the characters of insects in their relation to the methods of combating them, together with concise considerations of the life history and habits of some of the more important insects with which the farmer and fruit grower have to deal.

Attention will also be given to the making and application of insecticides.



TWO STRIPED SWEET POTATO BEETLE.

XIV. Farm Accounts.—Twelve Hours.

Prof. H. T. Harrison.

A simple, concise and accurate method of keeping farm accounts. Business methods are as necessary to the successful farmer as to the merchant. Neither can do without a practical knowledge of book-keeping.

XV.—Road Construction.—Five Hours.

Prof. Henry Lanahan.

A brief treatment of the principles involved and the methods used in the location, construction and maintenance of country roads.

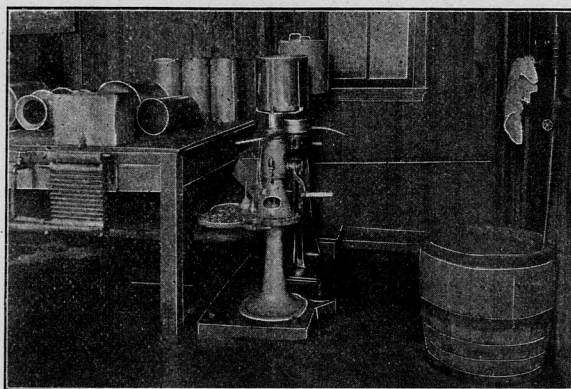
LEVELLING. An opportunity will be given those desiring it to learn the use of the level in laying out drains, &c.

XVI.—Civil Government.—Ten Hours.

Prof. F. B. Bomberger.

The general principles of government; the rights and duties of citizens; and an inquiry into the political institutions of Maryland.

SHORT COURSE IN DAIRYING.



INTERIOR VIEW OF CREAMERY.

There are a great many boys who expect to engage principally in dairying as a life work. For such the college has provided a short course in dairying. Dairymen of the present day need instruction in the new methods which have come to the front and revolutionized the industry in the last few years. This course will commence at the same time as the short course in agriculture and will last eight weeks. The requirements and conditions are the same as for the short agricultural course.

As the greater part of the dairy work of the State is in making butter in the private dairy and in producing milk for the city supply these special lines will be particularly emphasized in the instruction given, though sufficient practical work will be given in butter making to fit a few of the better qualified to take charge of creameries, a large number of which are found in the State. All instruction as far as possible will include both theoretical and practical work and the text book and lectures will be illustrated in the creamery which is equipped with separators, churn and butter worker, and power and hand Babcock test machines are in daily use.

Separating cream from milk will be taught by lectures and by work with the two separators in the creamery.

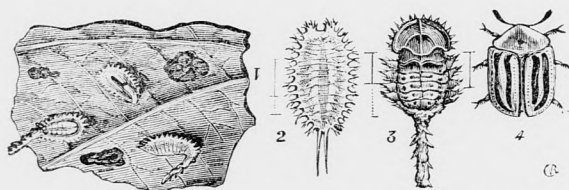
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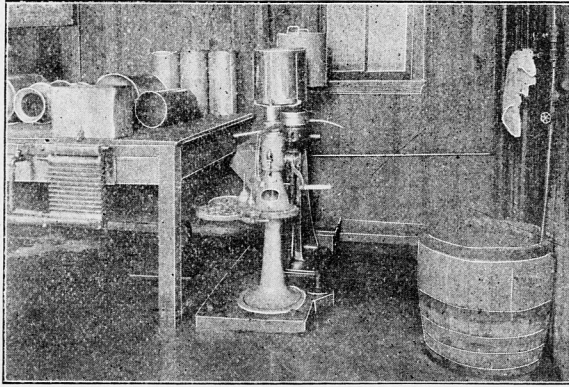
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Separating cream from milk will be taught by lectures and by work with the two separators in the creamery.

Ripening the cream and butter making will be taught by lectures and the student will be required to do the churning sufficiently to become thoroughly familiar with the entire process.

Milk testing will be taught from text and students will be thoroughly drilled in the use of the Babcock test.

Bacteriology will be taught from text and all methods for producing thoroughly clean milk will be discussed.

Feeding the dairy cow will be taught by lectures.

Each student will be expected to provide himself with two white suits, which can be purchased at small cost.

In addition to the regular short course an apprentice course in dairying is offered which has for its special object the preparation of boys to take charge of dairy herds as there is a larger demand for such than we have been able to fill. These places usually pay much better wages than can be secured by the ordinary farm hand. The boys taking this course are expected to stay six months and put in practically all of the forenoon and an hour in the afternoon milking, working with the dairy herd and making butter. They will receive instruction in the same subjects as the boys taking the short course in dairying and to compensate them for their work their board and lodging will be furnished free, the only expense being for the two white suits, necessary bedding and for washing. Boys over 17 and who know how to milk are wanted and all such applying will be given preference in the order of their applications. As only three apprentices can be accommodated at one time it may be necessary for applicants to wait some time for their turn. By Prof. Chas. F. Doane.

For further particulars address:

President R. W. Silvester,
Maryland Agricultural College,
College Park, Md.

Or

Director H. J. Patterson,
Md. Agrl. Experiment Station,
College Park, Md.



To The Farmer of Maryland:

The Maryland Agricultural College,

COLLEGE PARK, MD.

MARYLAND'S SCHOOL OF TECHNOLOGY.

**OUR COURSES OF INSTRUCTION,
AGRICULTURAL, MECHANICAL, SCIENTIFIC, CLASSICAL.**

Fall Term commences Monday, September 23d. Candidates for admission will be examined on September 19, 20 and 21.

Each department supplied with the most modern and approved apparatus. Practical work emphasized in all departments. Graduates qualified to enter upon their life's work at once.

Practical Laboratories for the Departments of Chemistry, Entomology, Pathology, Agriculture, Horticulture, Biology, Physics and Engineering.

This is the day for knowing **HOW TO DO** *some one thing well*.
The boy so equipped is ready for the battle of life.

DAILY SANITARY INSPECTION BY PHYSICIAN TO COLLEGE.

Boarding department supplied with all modern improvements. New bath rooms and closets in an annex to the main building. Steam heat and gas, books, room, heat, light, washing, board, medical attention.

\$154.00 For the Scholastic Year.

\$5.00 caution money on entrance. \$6.00 for material for each laboratory. Payments made quarterly.

Catalogue, giving full particulars, sent on application.

R. W. SILVESTER,
President Maryland Agricultural College,
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